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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,041	07/10/2007	Yoshitsugu Morita	DC10032PCT (71,051-071)	3380

27305 7590 10/18/2010

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EXAMINER	
HUDA, SAEED M	

ART UNIT	PAPER NUMBER
1742	

MAIL DATE	DELIVERY MODE
10/18/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/599,041	MORITA ET AL.	
	Examiner	Art Unit	
	SAEED M. HUDA	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 September 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) *10* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The response filed on 09/02/2010 has been fully considered and entered into the record. Claims 1-10 are pending in the instant application. Claim 10 is withdrawn from consideration as directed to non-elected subject matter.

Response to Arguments

2. Applicant's arguments filed have been fully considered but they are not persuasive.

Applicant traverses the rejection of claim 1-9 over Miyajima et al. in view of Lee et al. on the basis that the Examiner has failed to properly establish that every element of independent claim 1 is taught by the above combination of references.

Rejection of Claims 1-9 Under 35 U.S.C. §103(a) Over Miyajima et al. in View of Lee et al.

Applicant states that the Applicants submit that the Examiner has failed to establish that Miyajima et al. and Lee et al. teach every element of independent claim 1, and that the Examiner has improperly relied upon the doctrine of obvious optimization of a known result-effective variable to establish the instant rejections.

The Applicants goes over the standard for 35 U.S.C. § 103.

Applicant then goes on to talk about the doctrine of obvious optimization of a known result-effective variable that has been relied upon by the Examiner to support the obviousness rejection of claim 1. The Applicants recognize that optimization of known result-effective variables can provide a basis for establishing prima facie obviousness under some circumstances.

Applicant refers to MPEP 2144.05: specifically MPEP 2144.05(II.)(A.) and MPEP 2144.05(B.) and states that as made clear through the foregoing references to the MPEP, it is imperative that the optimization analysis be tied to a particular result achieved by the variable at issue, and a proper analysis must explain why it would be routine to optimize the variable to arrive within the confines of the claimed range at issue. After all, if the prior art teaches or suggests a beneficial result that is attributable to higher amounts of a given component, it clearly cannot be concluded that one of skill in the art would include lower amounts of the component outside of the disclosed range in the prior art to "optimize" the amount of the component.

The Examiner notes that the above arguments are all directed to optimization and that said arguments are moot in that inherency is now used as a legal basis to reject the claims. The claim language has been met in that the Examiner has met the burden of inherency by showing reasons Lee's material is substantially the same as the claimed material.

For discussion of inherency see MPEP 2131.01 III "To Show That A characteristic not Disclosed ... is inherent". Note that discovery of a new property of an old product is not patentable.

Note: "[T]he PTO can require an applicant to prove that the prior art produce do not necessarily or inherently possess the characteristic of his [or her] claimed product. Whether the rejection is base on inherency' under 35 U.S.C. 102, on *prima facie* obviousness' under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same." The burden of proof is similar to that required with respect to product-by-

process claims. See chapter 2112 [R-3], section V of the MPEP, which cites *In re Fitzgerald*, 619 F. 2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting *In re Best*, 562 F. 2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)).

Applicants submit that the Examiner has failed to properly account for the claimed times that it takes for the silicone composition to grow from 1 kgf·cm to 5 kgf·cm as specified in independent claim 1. The Examiner has focused upon the disclosure, in Lee et al., of a hydrosilylation-curable liquid silicone composition that has a viscosity of less than 90 Pa·s at room temperature. Based upon the disclosure of Lee et al., the Examiner has reasonably concluded that because the structure of the material used in the prior art is the same as that being claimed and disclosed in the specification of the instant application (since both materials are the same in structure and the viscosity used in the prior art meets the claimed viscosity), lacking to the contrary, it is reasonably expected that the curability property of the prior art material is substantially the same as that being claimed. The burden is now shifted to applicant who has to show that the claimed curability property is significantly different from that possessed by the prior art material.

As related to these issues, Applicant is asked to review the inherency arguments presented above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyajima et al. (US 2002/0015748 A1) in view of Lee et al. (EP-A-0 99798).

a. Regarding claim 1, Miyajima et al. teach a method of manufacturing a semiconductor device sealed in a cured resin body by placing an unsealed semiconductor device into a mold and subjecting a curable resin composition that fills the spaces between the mold and the unsealed semiconductor device to compression molding under a predetermined molding temperature (abstract, [0001], figure 1). Miyajima et al. fail to tech the use of which is a liquid silicon composition, wherein the viscosity at room temperature is of 90 Pa·s or less.

Lee et al. teach a compression set of a hydrosilylation-curable liquid silicone composition used in cured injection moldable compositions (abstract). Lee et al. go on to teach that the silicon composition has a viscosity of less than 90 Pa·s at room temperature (paragraph 66 and examples 1-2) and is suitable for the encapsulation of chip scale packages (paragraph 19). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the invention of Miyajima et al. by selecting the invention of Lee et al. because this will yield desirable properties such as low alpha particle emissions, very good moisture resistance, excellent electrical insulation, excellent thermal stability, and very high ionic purity ([0002]).

As show in the prior art rejection above, the structure of the material used in the prior art is the same as that being claimed and disclosed in the

specification of this application. Since both materials are the same in structure and the viscosity used in the prior art meets the claimed viscosity, the material of the prior art would necessarily have the same curability property as that in the invention of Applicant. It has been well settled that discovering a new property of an old product is not patentable.

b. Regarding claims 2-3, Miyajima et al. in view of Lee et al. teach that the silicone composition is a hydrosilylation-curable liquid silicone composition (Lee et al. paragraphs 57-58) and that the cured silicone has a modulus of elasticity of 1 GPa or less (Lee et al. table 1);

c. Regarding claim 4, Miyajima et al. teach clamping the semiconductor device between the upper mold and the lower mold, and compression molding the adopted resin (figure 2).

d. Regarding claim 5, Miyajima et al. teach that the obtained sealed assembly is cut into separate sealed semiconductor devices (figure 5).

e. Regarding claims 6-7, it is a common practice to mount chip on a printed circuit board, electrically connecting the chips to the printed circuit board via bonding wires, and sealing the chips and the connections with a cured resin (figure 13).

f. Regarding claims 8-9, Miyajima et al. teach the use of release films (paragraph 50) held against the inner surface of the mold by air suction (paragraph 12).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAEED M. HUDA whose telephone number is 571.270.5514. The examiner can normally be reached on 8:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571.272.1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KHANH NGUYEN/
Primary Examiner, Art Unit 1791

/SAEED M. HUDA/
Examiner, Art Unit 1791